

## **Minnesota Flexible Air Permit Rule Capped-emission Permit and Individual State Permit with Environmental Management System Provisions Case Study**

The Minnesota Pollution Control Agency (MPCA) adopted a rule that provides two new options to the state's air emissions permitting process: a capped emission permit and an individual state permit with environmental management system (EMS) provisions. The rule was effective on December 6, 2004, and the new options are available for qualifying facilities that require synthetic minor air permits.

The capped emission permit is a "rule-based" option, meaning the permit requirements are contained in the rule itself rather than in the permit document. It is designed for noncomplex facilities that do not require site-specific permit conditions. As long as a facility meets the permit requirements and has emissions less than 90 percent of the federal permitting thresholds, it may make physical and operational changes without requiring a permit amendment from the MPCA.

The EMS permit option is an individually issued state permit option that allows small and medium-sized facilities that use a qualifying (ISO 14001) EMS to operate under emission caps set below federal thresholds. The EMS permit allows facilities to make physical and operational changes without advanced approval from MPCA, and offers relief from some recordkeeping and reporting requirements.

Both options limit all hazardous air pollutant emissions below levels that would otherwise subject a facility to federal major source requirements.

The MPCA has added the capped emission permit and EMS permit as alternative options to the individual state air permit. No existing air permit options have been changed or removed. Only facilities that elect to apply for one of the options will be affected by the rule. The MPCA estimates that between 100 and 135 facilities are eligible to apply for the capped emission permit and up to 10 facilities are eligible to apply for the EMS permit, with more sources becoming eligible for the option as they adopt qualifying EMSs.

### **I. Background**

#### **MPCA Air Permitting History**

The rule establishing the capped-emissions permit and EMS permit options added new permit categories to the MPCA air permitting rules for the first time in ten years. In the early 1990s, the MPCA revised its air emission permit rules (1) to incorporate into the state program the new requirements governing federal operating permits required by Title V of the 1990 Clean Air Act Amendments, and (2) to revise state permit rules for two categories of state permits—"rule-based" registration permits for the smallest and most

numerous air emission sources, and state individual permits for the remaining sources below the federal thresholds.

With the 1990s permitting program, the MPCA integrated operating and construction permits, aiming to streamline its state permitting process in order to allow resources to be directed to the permitting of the largest emissions sources—those that require federal operating permits. After 10 years of experience with the permitting program, however, the MPCA found that implementation of the federal Title V operating permits program was more complex and time-consuming than expected, and the agency continued to struggle with a permit backlog.

The permit backlog situation led the MPCA to begin investigating new permit options and ultimately resulted in the rule establishing the capped-emissions permit and EMS permit options as alternative options to the individual state air permit. In addition to alleviating the permit backlog, the MPCA also sought a solution that could serve as an incentive for air emission sources to reduce emissions below federal thresholds, eliminating some Title V permits, and keep emissions from growing even as businesses expand.

### **Need for Capped-emissions and EMS Permit Options**

An MPCA review of emissions inventories, permit records, and the typical conditions the MPCA places into individual state permits found that many small- and medium-sized stationary sources are synthetic minors (facilities that have potential emissions over the federal thresholds but take permit limits to keep their actual or allowable emissions below those levels) and/or require similar permit requirements. The MPCA also found that a significant number of stationary sources that apply for Title V permits have actual emissions that are much lower than federal permitting thresholds but still apply for Title V permit. Also, some Title V sources emit at levels just over the federal threshold. Staff at the MPCA believed the new permit options could act as an incentive for a facility to reduce emissions below federal permitting thresholds in order to qualify for a permit that requires less amendment process.

The MPCA determined that a “rule-based” permit option that places caps on actual emissions of criteria pollutants at 75 to 90 percent of federal permit thresholds would adequately address the permit and flexibility needs of many of these small- and medium-sized sources, help reduce permit backlog, and reduce emissions.

### **IBM EMS Permit Pilot Project**

In 2002, the MPCA initiated a pilot EMS permit project with IBM’s facility in Rochester, Minnesota. The MPCA worked with IBM and the U.S. Environmental Protection Agency (EPA)-Region 5 to develop an experimental air permit that incorporates an enhanced EMS and provides IBM relief from certain amendment, recordkeeping, and reporting requirements.

The MPCA selected the IBM Rochester facility for the pilot because it is a top-performing facility with minor environmental impacts. IBM's facility in Rochester is a synthetic minor for air permitting purposes, and the facility has in place an ISO 14001 EMS that has been subject to third-party audits since 1998.

The experimental permit is a variation of the MPCA's existing state air Option D registration permit and retains the Rochester facility's classification as a synthetic minor source. The permit contains facility-wide caps between MPCA major source and registration permit limits and offers operational flexibility. The permit also allows emissions to be calculated annually instead of monthly and replaces routine MPCA inspections with third-party EMS audits. A separate case study discusses the IBM EMS permit pilot in greater detail and can be accessed via the following Web link <http://www.epa.gov/permits/ems/resources.htm>.

The IBM experimental permit required application of variances to requirements of MPCA's air emission permitting rules, and required the MPCA to take the permit through both a permit issuance and a rule variance process. The new flexible air permit rule with the EMS permit option put into rule the same reduced amendment and recordkeeping permit provisions for other EMS facilities that the MPCA staff developed in the IBM pilot project, eliminating the need for a variance. The IBM permit also established the precedent for providing process change flexibility (with no amendments or pre-approvals required) for facilities with actual emissions between 50 percent and 90 percent of federal thresholds. Previously, this flexibility had only been offered through registration permits with a ceiling of 50 percent of federal thresholds. This paved the way for both the capped and EMS permit options.

## **II. Description and Provisions of the Flexible Air Permit Rule**

The flexible air permit rule provides two permit options for minor stationary air sources (alternative to the individual state permit): the "rule-based" capped-emissions permit and the individual state permit with EMS provisions.

### **Alternatives to Individual State Permit**

The capped-emissions permit and EMS permit provide alternatives to the individual state permit. The individual state permit is facility specific. It is issued to facilities that fall below federal thresholds but above the state thresholds, or to synthetic minor sources. An individual state permit is non-expiring (with certain exceptions), takes between 3-6 months to be issued, and requires the following:

- Full permit application process with full application document that determines all applicable requirements for the specific facility and proposes compliance methods for all equipment at the facility.
- 30-day public notice period and simultaneous 45-day EPA review period.
- Application for and MPCA approval of permit amendments for each change at a facility (minor, moderate, major, or administrative).

- Daily records and monthly emissions calculations (in most cases).
- Tailored control equipment requirements.
- Facility specific compliance requirements.
- Annual submittal of emissions.
- Semiannual submittal of deviations report.

### **Capped-emissions Permit**

The capped-emissions permit option was created for small- and medium-sized sources that do not need site-specific conditions limiting their emissions in order to comply with their applicable environmental requirements. It is a hybrid of MPCA's Option D rule-based registration permit and the individual state permit (see the attached comparison of MPCA air permit options for details). The capped-emissions permit allows eligible facilities to make physical and operational changes without advanced MPCA approval yet imposes environmental limitations similar to those that would be found in individually developed permits.

In order to be eligible for the capped-emissions permit, a facility must have actual emissions below capped permit thresholds (see table below) and demonstrate, using one of two modeling methods, that ambient concentrations of certain pollutants beyond the facility's property line are lower than the ambient air quality standards. If a facility requires site-specific conditions in its permit, it is not eligible for a capped-emissions permit.

The capped-emissions permit differs from an individual state permit in the following ways:

- Applicable permit requirements are contained in a rule (rather than in a tailored, facility-specific permit document).
- Capped-emissions permit is issued in 60-90 days (rather than 3-6 months).
- Capped-emissions permit provides a shortened application package and a one-page permit document (rather than a full permit document).
- A 30-day comment period prior to MPCA issuing the permit is required on a facility's eligibility for the rule, but no public notice or 45-day EPA review period is required. The MPCA maintains an electronic listserv that notifies subscribers when a capped-emissions permit application is received and signifies the beginning of a 30 day comment period.
- A facility is allowed to make changes without permit amendment and MPCA approval as long as the facility remains below thresholds and meets other eligibility requirements. (The facility must, however, use one of the modeling methods to verify that the facility will not violate ambient air quality standards.)
- Deviation reports must only be submitted semi-annually if a deviation occurred (instead of semiannually, regardless of whether a deviation occurred).

A facility may choose between two options for the capped-emissions permit. Option 1 allows higher facility-wide emission limits than option 2 but requires tracking of emissions from insignificant activities (see following table).

## EMS Permit

Unlike the rule-based capped-emissions permit, the EMS permit option is an individual, facility-specific permit. The EMS permit allows small and medium-sized air emission facilities that require site specific permit conditions, and therefore do not meet the qualifications for the capped-emissions permit, to use a qualifying ISO 14001 EMS to operate under emission caps set below federal thresholds. The EMS individual permits accommodate conditions that the capped-emissions permits do not, including any New Source Performance Standard (rather than the ten specified in the capped-emissions permit), site-specific limits based on State Implementation Plan requirements or performance testing, and limits assumed in an Ambient Air Quality Assessment. Like the capped-emissions permit, the EMS permit offers relief from minor and moderate permit amendment application requirements. The EMS permit also may provide relief from some record keeping and reporting requirements as described below.

To be eligible for an EMS permit, a facility must maintain (or plan to implement and maintain) an EMS that conforms to ISO 14001 standards. The facility must also undergo periodic independent third-party EMS auditing by a certified auditor and registrar. Like the capped-emissions permit, the EMS permit also requires a facility to demonstrate eligibility for the permit, using one of two modeling methods, by showing that ambient levels beyond the property line are lower than the ambient air quality standards for certain pollutants.

In addition to the EMS requirements, the EMS permit differs from the capped-emissions permit in that it is an individual rather than rule-based permit, it requires the full permit application process and full permit document, it provides a 45-day EPA review period, and it may provide some record keeping and monitoring relief. The capped-emissions permit differs from an individual state permit in the following ways:

- A facility is allowed to make minor and moderate changes without permit amendment and MPCA approval as long as the facility remains below thresholds and meets other eligibility requirements. (Unlike the capped-emissions permit, the EMS permit does not require modeling before each change—MPCA's review at the time of initial permitting will anticipate such changes.)
- Monthly (instead of daily) recordkeeping and emissions calculations are required on an individual pollutant basis when the facility achieves very low (approximately 25 percent of federal thresholds) actual emission levels.
- Deviation reports must only be submitted semi-annually if a deviation occurred (instead of semiannually, regardless of whether a deviation occurred).

### *Role of EMS in Permit*

The EMS component of the permit and required periodic EMS audit provide the MPCA with an indication of the performance and compliance status of a facility with an EMS permit. This EMS component provides the basis for allowing a facility to make physical and operational changes without amendment and for reduced recordkeeping and reporting requirements.

The EMS permits will be issued with both customary and EMS permit conditions written into the permit. Therefore, if a facility has not fully implemented an EMS at the time of permit application or if it decides to quit using the EMS after the permit is issued, the facility can use the customary permit conditions.

### Comparison of Permit Emission Thresholds (tons/year)

Pollutant	Capped-emissions Permit		EMS Permit	Individual State Permit (these levels minus facility-specific "safety margin")
	Option 1	Option 2		
<b>HAPs</b>	9.0 for single HAP 20.0 total for all HAPs	8.0 for single HAP 20.0 total for all HAPs	10.0 for single HAP 25.0 total for all HAPs	10.0 for single HAP 25.0 total for all HAPs
<b>PM</b>	90.0	75.0	100.0	100.0
<b>PM10</b>	90.0	75.0	100.0	100.0
<b>VOC</b>	90.0	85.0	100.0	100.0
<b>SO<sub>2</sub></b>	90.0	90.0	100.0	100.0
<b>NO<sub>x</sub></b>	90.0	85.0	100.0	100.0
<b>CO</b>	90.0	85.0	100.0	100.0
<b>Pb</b>	0.5	0.5	0.5	0.5

## III. Expected Benefits of the Flexible Air Permits Rule

The capped-emissions permit and EMS permit rule is expected to provide many benefits over an individually developed state permit for both regulated minor air source facilities and the MPCA. Because the rule is still presently new, this study can only discuss expected benefits rather than actual results. The MPCA has currently issued a few capped-emissions permits but has not yet reviewed applications for any EMS permits. The following sections will describe actual benefits where they have been recognized.

### Benefits for Eligible Facilities

Expected benefits of the rule for eligible facilities include cost and resource savings, flexibility to make changes, possible reduced recordkeeping and reporting, and regulatory benefit for the use of EMS.

#### *Cost and Resource Savings*

The rule should result in cost and resource savings for eligible facilities. Because the capped-emissions permits are rule based, facilities should experience significant cost savings due to the faster and more certain regulatory timeline for MPCA decisions on these permits. Potential cost savings for applicants come from their ability to have permit applications acted upon more quickly, resulting in less delay in making and implementing their business plans. The permit application package for the capped-emissions permit is shorter and should take less time for applicants to complete. In addition, eligible facilities should experience cost savings because they will not have to apply for amendments and wait for approval for physical and operational changes.

The EMS permit may take slightly more time and resources for applicants to complete than would an individual state permit. However, the provision that allows facilities to make changes without applying for amendments should save time and money over the long term.

### *Flexibility to Make Changes*

Both permit options allow facilities that comply with the permit requirements to make physical and operational changes without obtaining MPCA approval or permit amendment as long as they remain below the emissions caps. This allows facilities flexibility to make needed changes without the burden and time delay of applying for permit amendments.

### *Reduced Recordkeeping and Reporting*

The rule allows some relief from recordkeeping and reporting requirements. Under both permit options, an eligible facility is required to submit a deviation report only if a deviation occurred in the past six-month period, instead of every six months, regardless of whether a deviation occurred. Moreover, the EMS permit requires monthly (instead of daily) recordkeeping and emissions calculations on an individual pollutant basis when the facility achieves very low (approximately 25 percent of federal thresholds) actual emission levels.

### **Benefits for the MPCA**

The rule is expected to result in less time and resources spent by the MPCA, while imposing the same environmental limitations as would be found in individually developed permits for the eligible facilities.

### *MPCA Cost and Resource Savings*

The MPCA is expected to realize cost and resource savings with the capped-emissions permit because the agency will not need to prepare as many individually drafted permits. To date, the MPCA has issued a few capped-emissions permits. Actual time spent per permit application was reduced from 100-250 hours to 10 hours. Although the cost for MPCA to permit a facility under the EMS permit option is slightly greater than it would be to issue the same facility an individual state permit, the permit language for the EMS provisions are “boiler plate” (therefore, easy to incorporate) and cost differences are only slight. In addition, the MPCA should save time and resources with both permit options because it does not have to process permit amendments due to physical and operational changes at eligible facilities.

### *MPCA Shift of Focus to Higher Risk Polluters*

The capped-emissions permit and EMS permit rule is expected to allow the MPCA to shift its resources and focus more appropriately on developing permits for facilities where more individualized work is needed due to risk or higher emissions. The MPCA found from its emissions inventory that the capped-emissions permit and EMS permit options effectively regulate a group of sources that are numerous in comparison to their percentage of criteria pollutant emissions. The rule should allow MPCA to alleviate their permit backlog and focus on the highest risk polluters.